

Asian countries top OECD's latest PISA survey on state of global education

03/12/2013 - Asian countries outperform the rest of the world in the OECD's latest PISA survey, which evaluates the knowledge and skills of the world's 15-year-olds.

The OECD's PISA 2012 tested more than 510,000 students in 65 countries and economies on maths, reading and science. The main focus was on maths. Math proficiency is a strong predictor of positive outcomes for young adults. It influences their ability to participate in post-secondary education and their expected future earnings.

Shanghai-China, and Singapore were top in maths, with students in Shanghai scoring the equivalent of nearly three years of schooling above most OECD countries. Hong Kong-China, Chinese Taipei, Korea, Macao-China, Japan, Liechtenstein, Switzerland and the Netherlands were also in the group of top-performing countries.

“With high levels of youth unemployment, rising inequality and a pressing need to boost growth in many countries, it's more urgent than ever that young people learn the skills they need to succeed,” said OECD Secretary-General Angel Gurría during the launch in Washington D.C. “In a global economy, competitiveness and future job prospects will depend on what people can do with what they know. Young people are the future, so every country must do everything it can to improve its education system and the prospects of future generations.”

The survey reveals several features of the best education systems. Top performers, notably in Asia, place great emphasis on selecting and training teachers, encourage them to work together and prioritise investment in teacher quality, not classroom sizes. They also set clear targets and give teachers autonomy in the classroom to achieve them.

Children whose parents have high expectations perform better: they tend to try harder, have more confidence in their own ability and are more motivated to learn.

Of those 64 countries with trend data in maths up to 2012, 25 improved in maths, 25 showed no change and 14 did worse. Brazil, Germany, Israel, Italy, Mexico, Poland, Portugal, Tunisia and Turkey have shown a consistent improvement over this period. Shanghai-China and Singapore improved on their already strong performance in 2009.

Italy, Poland and Portugal also increased their share of top performers and reduced their share of low performers. Germany, Mexico and Turkey also managed to improve the performance of their weakest students, many of whom came from socio-economically disadvantaged backgrounds. This shows that countries can simultaneously improve equity and raise performance.

Giving every child the chance to succeed is essential, says the OECD. 23% of students in OECD countries, and 32% overall, failed to master the simplest maths problems. Without these basic skills, they are most likely to leave school early and face a difficult future. Some countries have succeeded in helping underperformers: Colombia, Finland, Ireland, Germany, Mexico and Poland have put in place systems to identify and support struggling students and schools early, and have seen the PISA scores of this group increase.

Other key findings include:

Gender gap

Boys perform better than girls in maths. They scored higher in 37 out of the 65 countries and economies, while girls outperform boys in 5 countries. The gender gap is relatively small though; in only six countries is it greater than the equivalent of half a year of formal schooling.

The gap is widest among top students, still wide among the weakest students and about the same for average ones. Girls also feel less motivated to learn maths and have less confidence in their abilities than boys.

Between 2000 and 2012, the gender gap in reading performance – favouring girls – widened in 11 countries and economies. Boys and girls perform similarly in science.

Reading

Of the 64 countries and economies with comparable data up to 2012, 32 improved their reading performance, 22 show no change, and 10 deteriorated. Chile, Estonia, Germany, Hungary, Israel, Japan, Korea, Luxembourg, Mexico, Poland, Portugal, Switzerland and Turkey improved their reading performance across successive assessments.

Across OECD countries, 8.4% of students are top performers in reading. Shanghai-China has the largest proportion of top performers – 25.1%. More than 15% of students in Hong Kong-China, Japan and Singapore are top performers in reading, as are more than 10% of students in Australia, Belgium, Canada, Finland, France, Ireland, Korea, Liechtenstein, New Zealand, Norway and Chinese Taipei.

Science

Shanghai-China, Hong Kong-China, Singapore, Japan and Finland are the top five performers in science in PISA 2012. Estonia, Korea, Viet Nam, Poland, Canada, Liechtenstein, Germany, Chinese Taipei, the Netherlands, Ireland, Australia, Macao-China, New Zealand, Switzerland, Slovenia, the United Kingdom, the Czech Republic and Belgium score above the OECD average in science.

Across OECD countries, 8.4% of students are top performers in science and score at the highest levels. This compares to more than 15% of students in Shanghai-China (27.2%), Singapore (22.7%), Japan (18.2%), Finland (17.1%) and Hong Kong China (16.7%).

Schools and students

High-performing school systems tend to allocate resources more equitably across socio economically advantaged and disadvantaged schools.

Teacher-student relations improved between 2003 and 2012 in all but one country, according to students' reports. The disciplinary climate also improved during the period, on average across OECD countries and in 27 individual countries and economies.

Better teacher-student relations are strongly associated with greater student engagement with and at school.

The share of immigrant students in OECD countries increased from 9% in 2003 to 12% in 2012. Over this period, the performance disadvantage of immigrant students compared to students without an immigrant background but with similar socio-economic status shrank by 11 score points, equivalent to three months of schooling.

The OECD's PISA results reveal what is possible in education by showing what students in the highest-performing and most rapidly improving education systems can do. The findings allow policy makers around the world to gauge the knowledge and skills of students in their own countries in comparison with those in other countries, set policy targets against measurable goals achieved by other education systems, and learn from policies and practices applied elsewhere.